Fisheries and Oceans Canada
Pêches et Océans Canada

The Fishing Industry in Quebec

Socio-economic profile **2009**

Policy and Economics Branch

QUEBEC REGION

Canada

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Acronyms

DFO: Fisheries and Oceans Canada
PEB: Policy and Economics Branch
FHAMIS: Fish Habitat Management Information System
MAPAQ: Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (Quebec Ministry of Agriculture, Fisheries and Food)
SLD: Statistics and Licences Division

Symbols and abbreviations

SM: millions of dollars
p: preliminary
t: tonnes (metric tons)

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Introduction

This document presents a portrait of the fishing industry in maritime Quebec. The first section provides an overview of the socio-economic situation in maritime Quebec and of the importance of the fishing industry in relation to other industries.

The second section describes in detail the primary maritime fishing sector in Quebec. Included is information relating to the evolution of catches, the main species landed, the principal ports and the workforce (fishers, licences and boats). A subsection is also devoted to commercial fishing by First Nations.

The third section deals with the processing of marine products. It brings together data on the composition and value of factory production, the number of jobs and sales destinations.

Finally, the last five sections briefly look at harp seal hunting, aquaculture, commercial freshwater fishing and sport fishing in maritime Quebec; as well as fishing and marine hunting in Nunavik.

1 Socio-economic profile of maritime Quebec

1.1 Demographic context

In 2006, maritime Quebec counted 385,717 citizens, nearly 5% of the population of Quebec. They were distributed over three areas: the Gaspe-Lower St. Lawrence area, the North Shore and the Magdalen Islands[1]. The Gaspe-Lower St. Lawrence area was, by far, the most populated with 281,892 inhabitants (73%), followed by the North Shore with a population of 90,850 (24%). The Magdalen Islands constituted only 3% of the residents of the maritime areas of Quebec, with a population of 12,975.

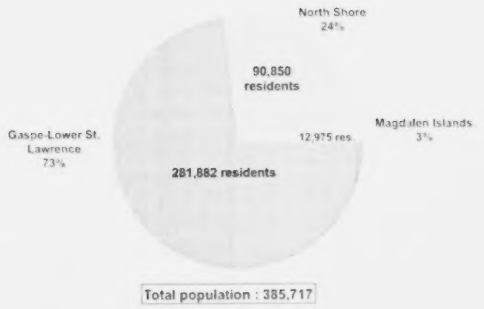
Map 1: Maritime areas in Quebec

Source: SLD and ISAMIS, 1999, Québec Region

Unlike Quebec as a whole, the population of the maritime areas has declined by 9% over the last twenty years, from a population of 422,507 in 1986 to 385,717 in 2006. Over the same period, the population of Quebec increased by 13% from 6.5 to 7.4 million. Thus, the proportion of Quebec's population that lives in the maritime areas has decreased since 1986, from 6.5% to 5.2%.

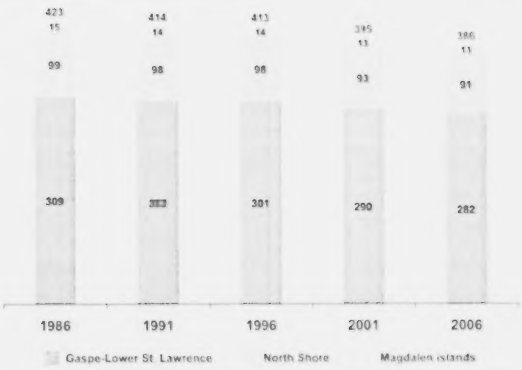
[1] The Gaspe-Lower St. Lawrence area corresponds to the Census Division (CD) of Rimouski-Neigette, Matane, La Matapedia, Avignon, Bonaventure, Gaspe-Est, Gaspe-Ouest, Rocher-Percé and Côte-de-Gaspé. The North Shore corresponds to the Census Division of Manicouagan, Haute-Côte-Nord, Sept-Rivières and Caniapiscau. The Magdalen Islands corresponds to the Census Division of Les Îles-de-la-Madeleine.

Graph 1: Distribution of the population in maritime Quebec by area, 2006



Source : Statistics Canada

Graph 2: Evolution of the population in maritime Quebec by area, 1986-2006

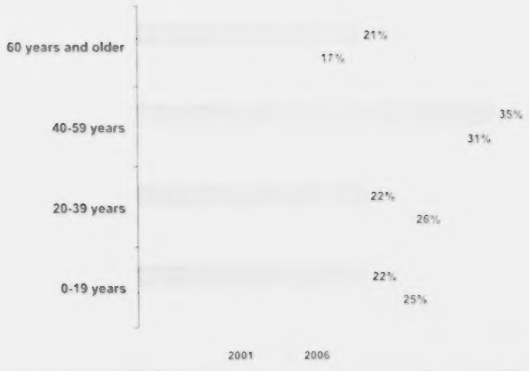


Source : Statistics Canada

From 2001 to 2006, the Gaspe-Lower St. Lawrence area showed the largest population decrease of 2.9% (8,312 inhabitants), followed by the North Shore with a decrease of nearly 2% (1,785 persons). Conversely, the population of the Magdalen Islands increased by 3.2% (400 inhabitants).

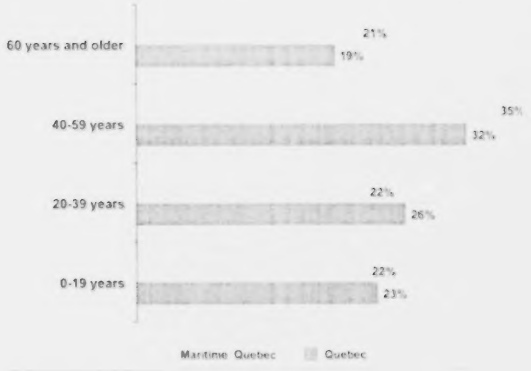
However, the age pyramid for maritime Quebec shows that the demographic changes are not uniform between age groups. For example, between 2001 and 2006, the proportion of the 0-39 years category decreased from 52% to 44%, while the 40 years and over category increased from 48% to 56%.

Graph 3: Evolution of the age pyramid in maritime Quebec, 2001 and 2006



Source : Statistics Canada

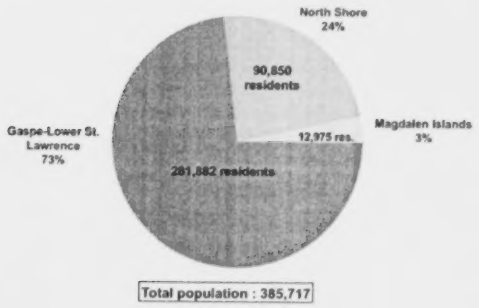
Graph 4: Age pyramids for maritime Quebec and Quebec as a whole, 2006



Source : Statistics Canada

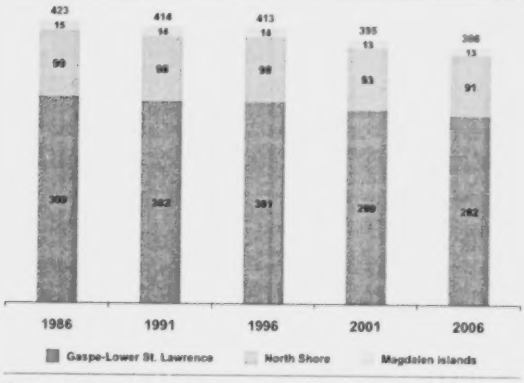
This breakdown at the base of the maritime Quebec age pyramid, labelled the exodus of young people, is very visible when compared to Quebec as a whole. As illustrated in Graph 4, in 2006 the proportion of those under 40 was significantly higher in Quebec as a whole (49%) compared to the maritime areas (44%).

Graph 1: Distribution of the population in maritime Quebec by area, 2006



Source : Statistics Canada

Graph 2: Evolution of the population in maritime Quebec by area, 1986-2006
(thousands of residents)



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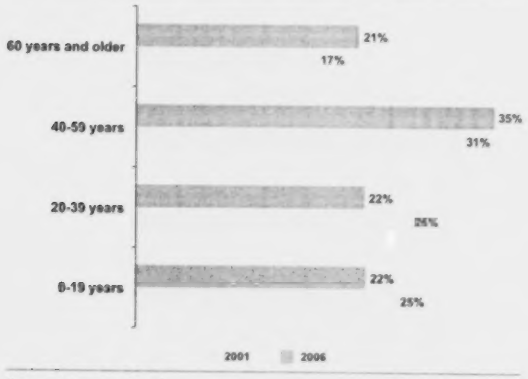
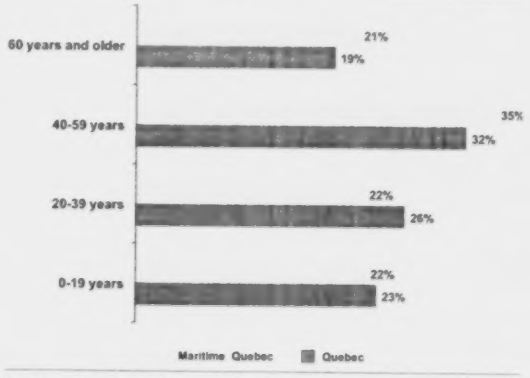


Source : Statistics Canada

Graph 4: Age pyramids for maritime Quebec and Quebec as a whole, 2006



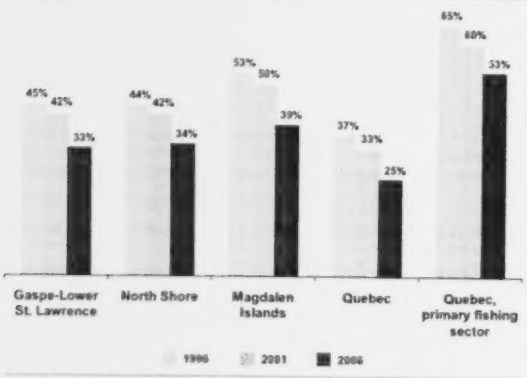
Source : Statistics Canada

This breakdown at the base of the maritime Quebec age pyramid, labelled the exodus of young people, is very visible when compared to Quebec as a whole. As illustrated in Graph 4, in 2006 the proportion of those under 40 was significantly higher in Quebec as a whole (49%) compared to the maritime areas (44%).

1.2 Level of education

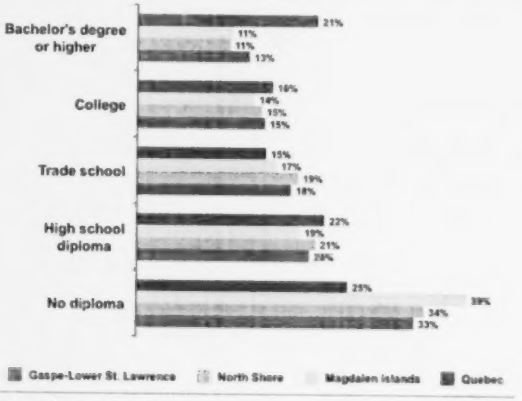
In the past ten years, the level of education of the overall maritime Quebec population, as well as that of workers in the fishing industry, has increased. Non-graduates are less common, while simultaneously, a growing segment of the population has a bachelor's degree or a more advanced degree or diploma. However, important disparities with the 2006 Quebec average can be seen. As such, the proportion of non-graduates is noticeably higher in the maritime areas and in the fishing industry, than in Quebec as a whole.

Graph 5: Change in the proportion of the population without a degree, in the maritime areas and in Quebec, 1996, 2001, and 2006[2]



Source: Statistics Canada

Graph 6: Level of education in the maritime areas and in Quebec, 2006



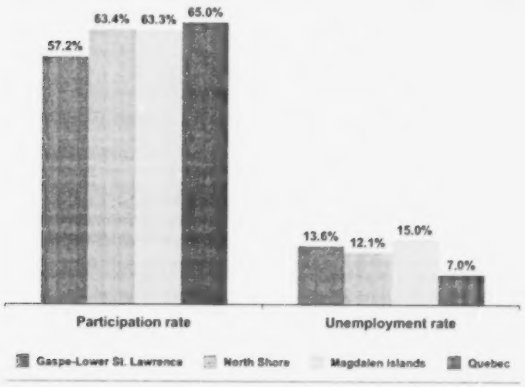
Source: Statistics Canada

[2] The 1996, 2001 and 2006 censuses used different methods to record information on level of education. The data must therefore be interpreted cautiously.

1.3 Participation and unemployment rates

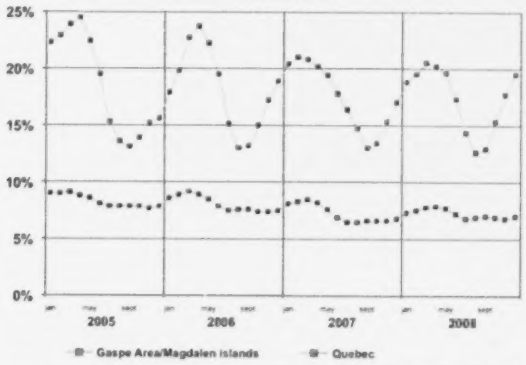
In 2006, the participation rates of the maritime areas were similar to that for Quebec as a whole, with the exception of the Gaspe-Lower St. Lawrence area, where the rate was nearly 10 percentage points lower than the Quebec average (57% vs. 65%)[3]

Graph 7: Participation and unemployment rates in the maritime areas and in Quebec, 2006



Source: Statistics Canada

Graph 8: Evolution of the monthly unemployment rate, Gaspe Area/Magdalen Islands and Quebec, 2005-2008



Source: Institut de la statistique du Québec

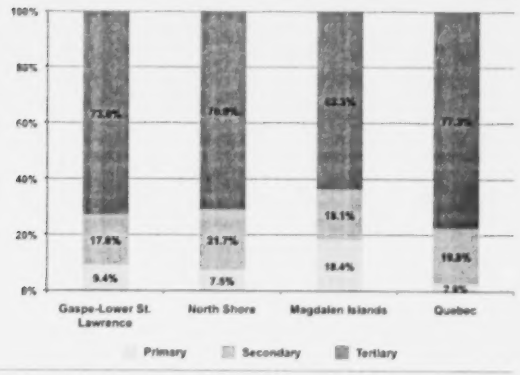
The unemployment rate in the maritime areas was higher than the Quebec average, and fluctuated much more according to the time of year. This is clearly shown in Graph 8, which illustrates the monthly unemployment rates for the Gaspé /Magdalen Islands and Quebec, over the years 2005 to 2008.

[3] The activity rate represents the proportion of people active in the job market (working or seeking work).

1.4 Sectors of activity and income composition

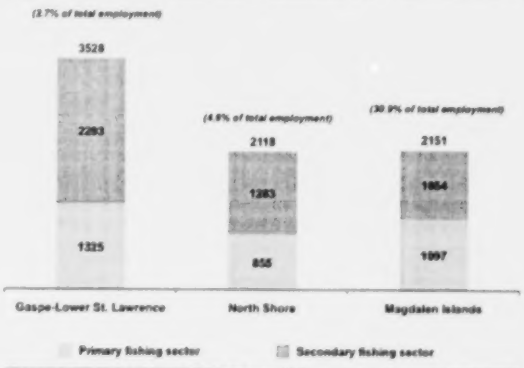
In maritime Quebec, the primary sector generated between 7% and 18% of all jobs in 2006. This is two to six times higher than the proportion observed for Quebec as a whole (2.9%). The Magdalen Islands have the highest proportion of jobs related to the primary sector (18.4%). With regard to the secondary sector, there was no significant difference between the maritime areas and Quebec as a whole, as illustrated in Graph 9.

Graph 9: Distribution of the active population by activity sector, 2006



Source: Statistics Canada

Graph 10: Number of jobs in the primary and secondary fishing sectors, 2007



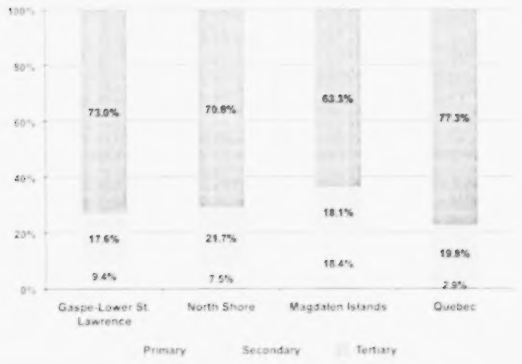
Source: SLD, DFO, Quebec Region

In 2007, nearly 7,800 people worked in the primary and secondary sectors of commercial fishing in maritime Quebec. Almost half of these jobs (3,528) were located in the Gaspe-Lower St. Lawrence area. In the Magdalen Islands, the 2,151 fisheries jobs accounted for 30.9% of all jobs in the region. The proportion of fisheries jobs, with respect to all employment, was much more modest in the other maritime areas, standing at 2.7% in Gaspe-Lower St. Lawrence and 4.6% on the North Shore.

In 2005, the average income[1] per citizen in the Magdalen Islands ($26,874) and in the Gaspe-Lower St. Lawrence area ($25,576) was respectively $5,200 and $6,498 lower than the Quebec average ($32,074). Furthermore, a significant part of this income came from government transfers[2]. As such, while government transfers represented only 13% of an average income in Quebec as a whole, their share was 22% in Gaspe-Lower St. Lawrence and 27% in the Magdalen Islands. On the North Shore, the average income ($31,867) as well as the share contributed by government transfers (16.1%), was more representative of the whole-of-Quebec statistics than those of other maritime areas.

1 The average income includes income from work, government transfers and all other income sources.

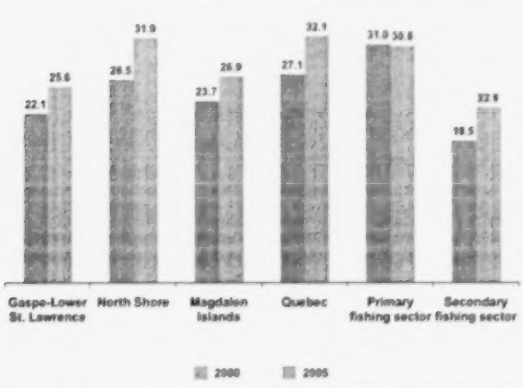
2 Government transfers include the Old Age Security pension, the Guaranteed Income supplement and benefits from the Quebec Pension Plan or from the Canada Pension Plan, employment insurance benefits, family benefits, federal tax credit for the elderly, and other assistance and social benefit sources.


100%
50%
60%
40%
20%
0%
73.0%
70.8%
63.3%
77.3%
17.6%
21.7%
18.1%
19.8%
9.4%
7.5%
18.4%
2.9%
Gaspé-Lower St. Lawrence
North Shore
Magdalen Islands
Quebec
Primary
Secondary
Tertiary

3526
2203
(4.6% of total employment)
2118
(30.4% of total employment)
2151
1263
1054
1325
855
1097
Gaspé-Lower St. Lawrence
North Shore
Magdalen Islands
Primary fishing sector
Secondary fishing sector

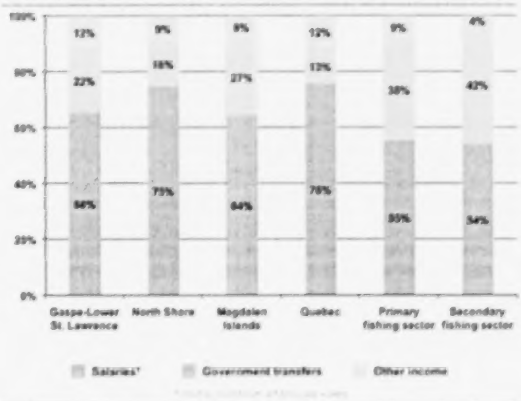
The average income of workers in the primary fisheries[1] sector was lower in 2005, compared to 2000 (when it was closer to the Quebec average). Although the salary of workers in the secondary fisheries[2] sector grew between 2000 and 2005, this change was within the 2005 Quebec average. A large proportion of workers' incomes in the primary and secondary fisheries sectors came from government transfers (36% and 42%, respectively).

Graph 11: Evolution of the average income in Quebec, the fishing industry, and the maritime areas, 2000 and 2005 (thousands of $)



Source: Statistics Canada

Graph 12: Composition of the average income in Quebec, the fishing industry, and the maritime areas, 2005



Source: Statistics Canada

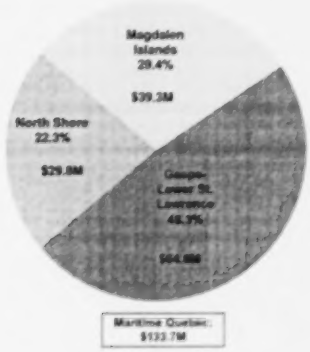
[1] The primary fisheries sector refers to those involved in capturing marine resources.
[2] The secondary fisheries sector refers to the marine resources processing sector.

2 Marine commercial fishing

2.1 Evolution of landings

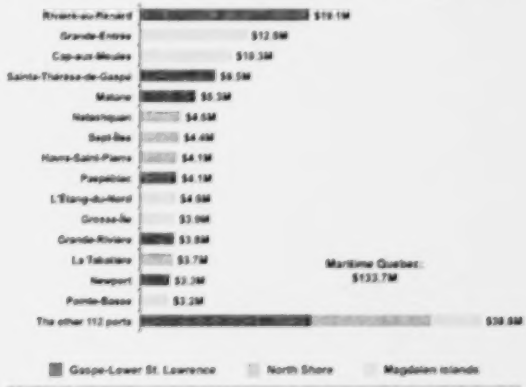
In 2008, landings in Quebec totalled 55,896 tonnes, for a value of $133.7M[1]. Nearly half of the captures (48.3%) were landed in the Gaspe-Lower St. Lawrence area, earning $64.6M. As illustrated in Graph 13, the Magdalen Islands and the North Shore had respectively 29.4% and 22.3% of the total landings in Quebec.

Graph 13: Value of landings in maritime Quebec, by area, 2008



Source: SLD, DFO, Quebec Region

Graph 14: The 15 principal fishing ports in maritime Quebec, by area, 2008



Source: SLD, DFO, Quebec Region

Quebec fish and seafood captures were landed in 127 different fishing ports. The 15 most significant ports accounted for 71% of the total landed value. The most significant port was that of Rivière-au-Renard ($19.1M), followed by those in Grande-Entrée ($12.0M) and Cap-aux-Meules ($10.3M).

As illustrated in Graph 15, shrimp landings are concentrated in a limited number of ports, while catches of other species are generally landed in numerous different locations. Map 2, on the following page, shows the locations of Quebec's 15 principal ports and the value of landings in each of the municipalities in the maritime areas of Quebec.

[1] The amount of the landings by fishers from the province of Quebec was $133.7M in 2008 (CAD).

2 Marine commercial fishing

2.1 Evolution of landings

In 2008, landings in Quebec totalled 55,895 tonnes, for a value of $133.7M . Nearly half of the captures (48.3%) were landed in the Gaspe-Lower St. Lawrence area, earning $64.6M. As illustrated in Graph 13, the Magdalen Islands and the North Shore had respectively 29.4% and 22.3% of the total landings in Quebec.

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Source: MAPAQ (Marine Region)

Graph 14: The 15 principal fishing ports in maritime Quebec, by area, 2008

Source: MAPAQ (Quebec Region)

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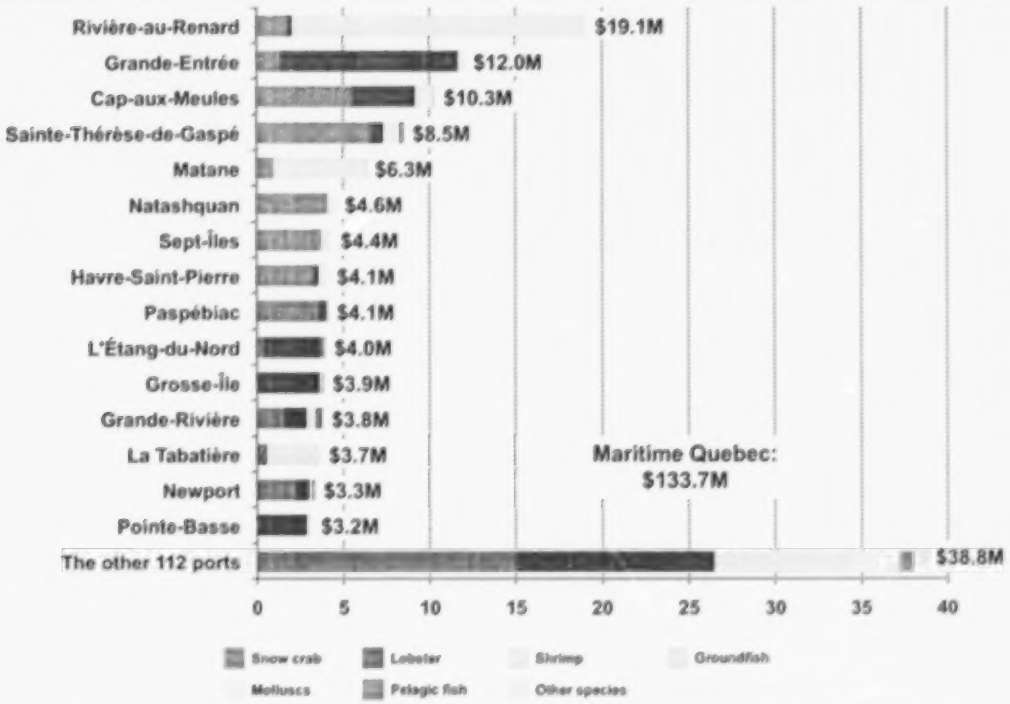
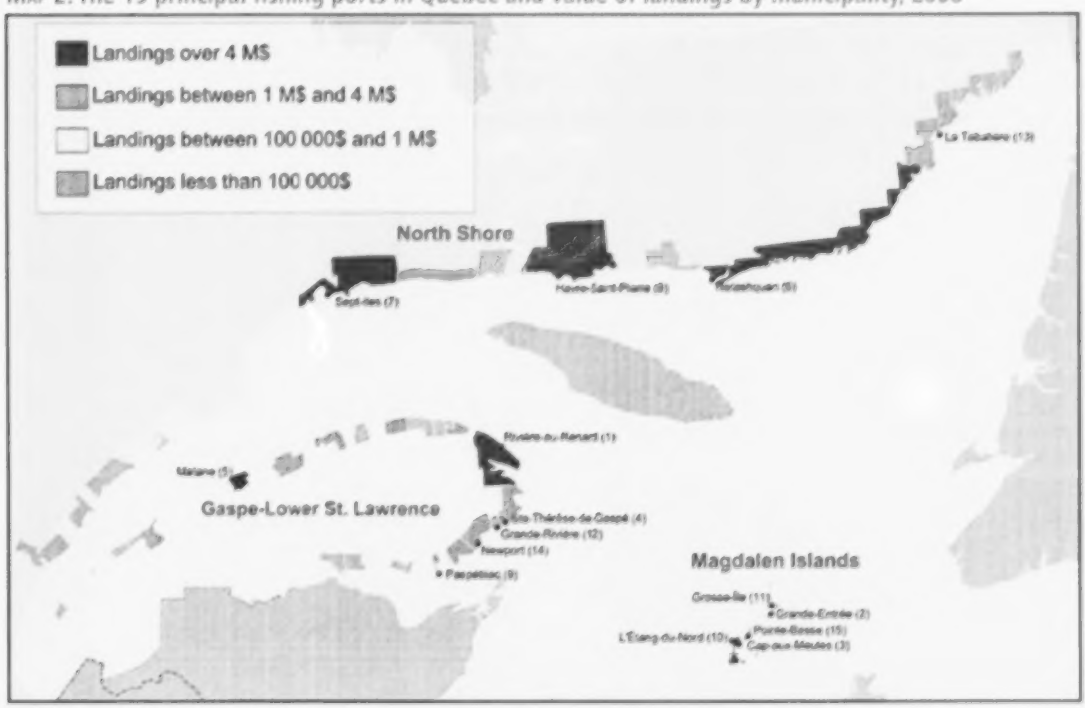


Source: SID, DFO, Quebec Region

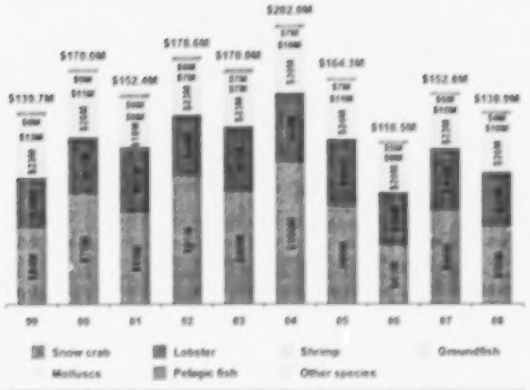
Map 2: The 15 principal fishing ports in Quebec and value of landings by municipality, 2008



Source: SID and FHAMIS, DFO, Quebec Region

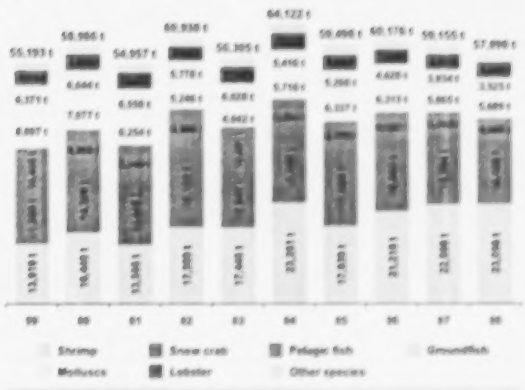
Graph 16 shows that the landed value in Quebec greatly increased between 1999 and 2004, from $140M to $202M. The still-unequalled peak of 2004 may be attributed to the high value of catches of the three principal crustaceans: snow crab, lobster and shrimp.

Graph 16: Value of landings by Quebec fishers, by species, 1999-2008



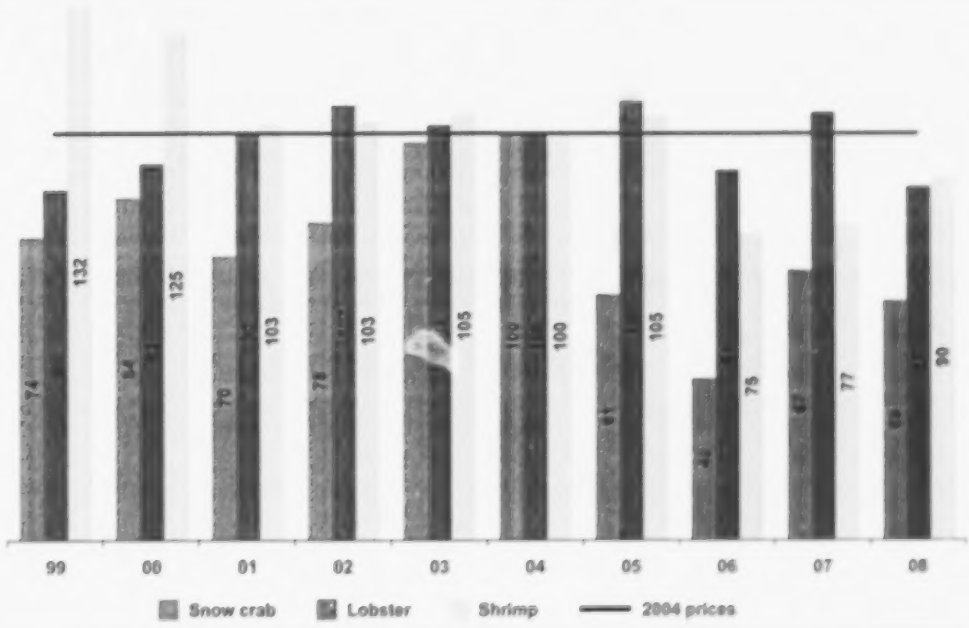
Source: SED, DFO, Quebec Region

Graph 17: Quantities landed by Quebec fishers, by species, 1999-2008



Source: SED, DFO, Quebec Region

Graph 18: Index of landing prices, by main species, Quebec, 1999-2008 (2004 = 100)



Source: SED, DFO, Quebec Region

From 2005 to 2008, the value of landings decreased significantly due to a decrease in the price of these same crustaceans. A drastic decrease of 60% was observed in the price of snow crab between 2004 and 2006. In 2008, the value of landings by Quebec fishers was $138.9M, more than 30% lower than the peak of 2004. The amounts landed were relatively stable between 1999 and 2008.[9]

$139.7M
$170.0M
$152.4M
$178.6M
$170.0M
$202.0M
$164.3M
$116.5M
$152.5M
$138.3M
99
00
01
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04
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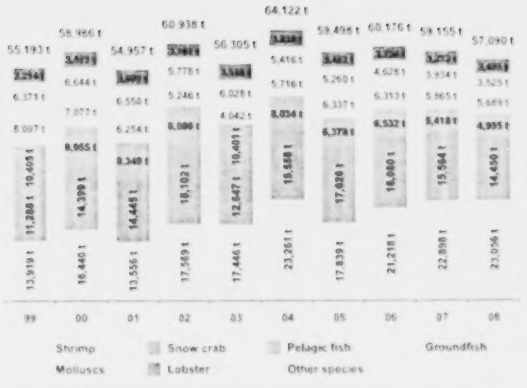
06
07
08
Snow crab
Lobster
Shrimp
Groundfish
Molluscs
Pelagic fish
Other species


55 193 t
58 966 t
54 957 t
60 938 t
56 305 t
64 122 t
59 498 t
60 176 t
58 155 t
57 040 t
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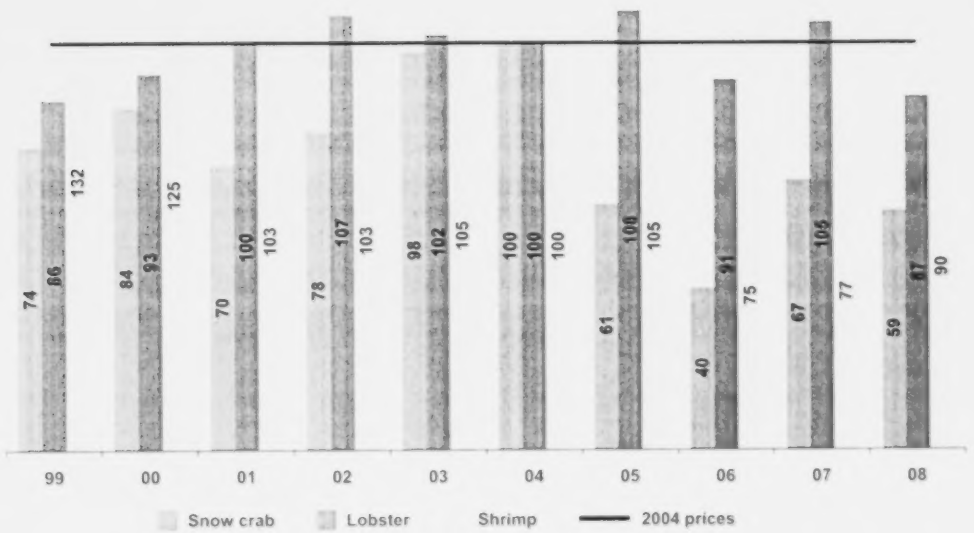
Shrimp
Snow crab
Pelagic fish
Groundfish
Molluscs
Lobster
Other species


74
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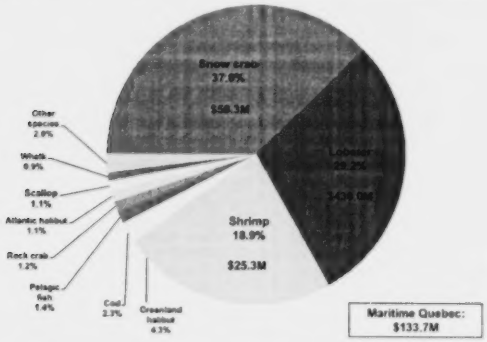
105
77
59
87
90
99
00
01
02
03
04
05
06
07
08
Snow crab
Lobster
Shrimp
2004 prices

2.2 Landed species

In 2008, the three main species landed in Quebec - snow crab, lobster and shrimp - represented 88% of the total value of landings. With landings valued at $50.3M (37.6%), snow crab was the main species captured, followed by lobster ($39M, 29.2%) and shrimp ($25.3M, 18.9%).

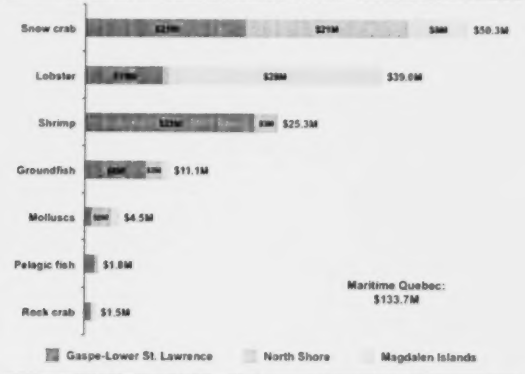
Pelagic fish, mostly herring, mackerel and capelin, represented more than 10% of landed volumes in Quebec. However, due to their low unit value, these species represented less than 1.5% of the value of landings in Quebec in 2008. Groundfish fishing (Greenland halibut, cod, Atlantic halibut, etc.), historically one of the principal fishing activities in Quebec [9], only represented 8.3% of the value of total landings in 2008. Other significant species of commercial value in Quebec include rock crab ($1.5M), scallop ($1.5M) and whelk ($1.2M).

Graph 19: Breakdown of species landed, by value, Quebec, 2008



Source: SLD, DFO, Quebec Region

Graph 20: Value of landings in Quebec by species and by maritime area, 2008



Source: SLD, DFO, Quebec Region

Graph 20 illustrates the distribution of landings in Quebec, by species and maritime area. It can be seen that snow crab mainly landed on the North Shore ($21.3M) and in the Gaspe-Lower St. Lawrence area ($21.1M). Furthermore, in Quebec, nearly three out of four lobsters are caught in the Magdalen Islands; the rest are essentially caught in the Gaspe-Lower St. Lawrence area. Otherwise, nearly 87.9% of shrimp, 72.2% of groundfish and 73.4% of pelagic fish are landed in the Gaspe-Lower St. Lawrence area. Finally, 51.1% of molluscs are caught on the North Shore.

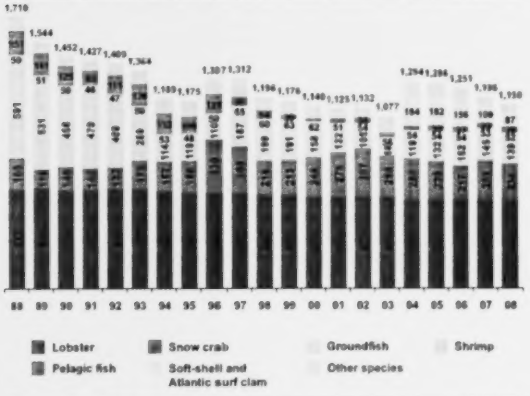
[9] Before 1995, groundfish represented more than one-third of the value of landings in Quebec.

2.3 Workforce

In 2008, there were 1,150 active commercial fishing businesses in Quebec and, as a result, approximately the same number of fisher-owners.[11] This number included, respectively, 544 and 234 enterprises that caught mainly lobster and snow crab. 139 businesses specializing in groundfish fishing were also active, as well as 52 in shrimp and 38 in pelagic species fishing.

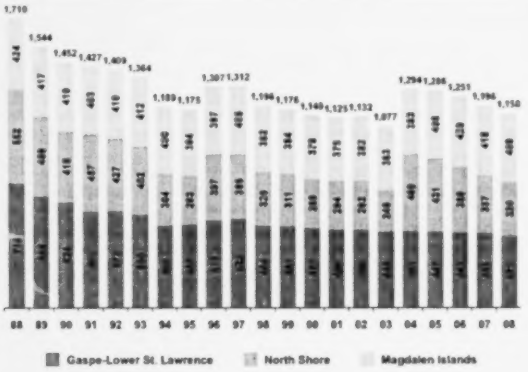
Fishing businesses were distributed more or less equally among the three maritime areas. In 2008, there were 421 businesses in Gaspe-Lower St. Lawrence area, 409 in the Magdalen Islands and 320 in the North Shore area.

Graph 21: Number of active fishing businesses by main landed species, Quebec, 1988-2008



Source: SLD, DFO, Quebec Region

Graph 22: Number of fishing businesses, by maritime area, Quebec, 1988-2008



Source: SLD, DFO, Quebec Region

2,015 licences were utilized in 2008. This signifies that, on average, each active business used 1.8 licences. Since fishers are generally allowed only one licence per species, this indicates that approximately 1.8 species were fished per business. The Gaspe-Lower St. Lawrence area had the largest number of licences in 2008 (763), followed by the Magdalen Islands (617) and the North Shore (613).

In addition to the 1,135 fisher-owners, there were nearly 2,400 crew members in Quebec in 2008, for a total of 3,523 fishers. As illustrated in Graph 24, most were between 45 and 64 years old (53%), followed by those 35-44 years old (24%), and some 16-34 years old (17%). Fishers 65 or more years old made up 6% of the total workforce in 2008, the highest proportion since 1988.

2.2 Landed species

In 2008, the three main species landed in Quebec - snow crab, lobster and shrimp - represented 88% of the total value of landings. With landings valued at $50.3M (37.6%), snow crab was the main species captured, followed by lobster ($39M, 29.2%) and shrimp ($25.3M, 18.9%).

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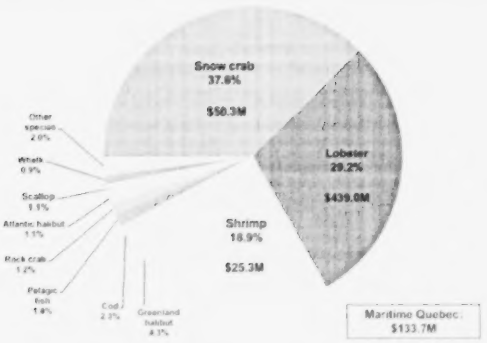

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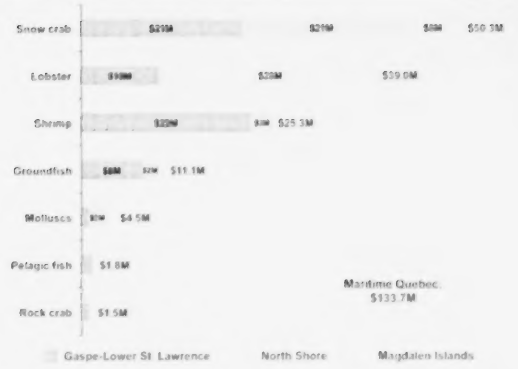

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2.3 Workforce

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Fishing businesses were distributed fairly evenly among the three maritime areas. In 2008, there were 421 businesses in Gaspé-Lower St. Lawrence area, 409 in the Magdalen Islands and 320 in the North Shore area.

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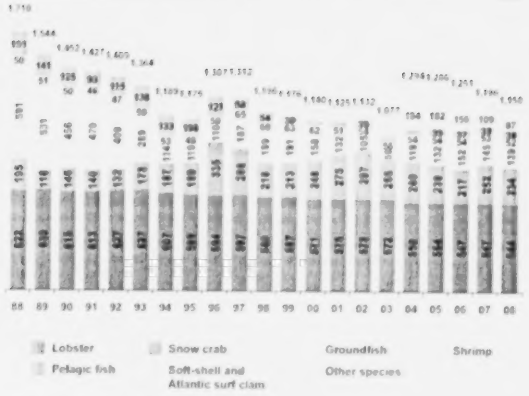
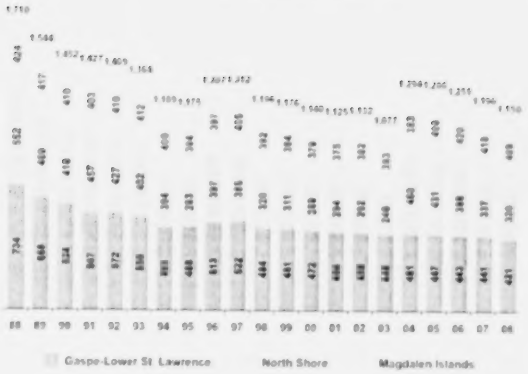


Graph 22: Number of fishing businesses, by maritime area, Quebec, 1988-2008



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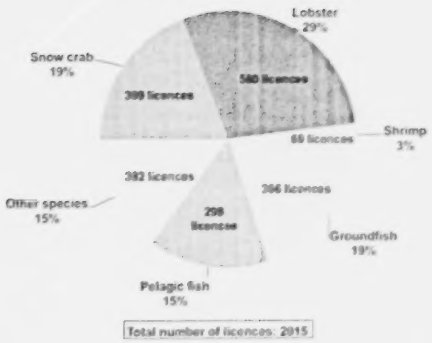
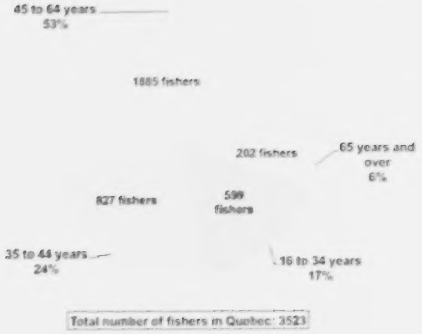
In addition to the 1,135 hired crews, there were nearly 2,400 crew members in Quebec in 2008, for a total of 3,525 fishers. As illustrated in Graph 24, most were between 45 and 64 years old (53%), followed by those 35-44 years old (24%), and some 16-34 years old (17%). Fishers 65 or more years old made up 6% of the total workforce in 2008, the highest proportion since 1988.

Graph 23: Number of active licences by species, Quebec, 2008

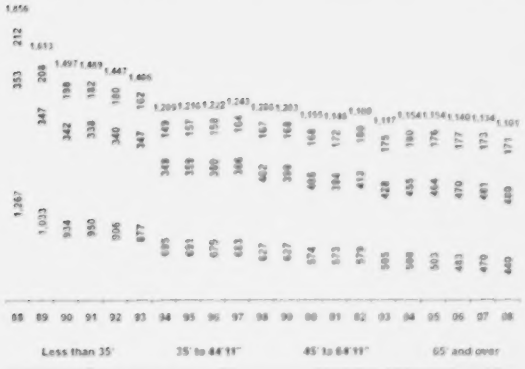


Graph 24: Distribution of fishers according to age, Quebec, 2008

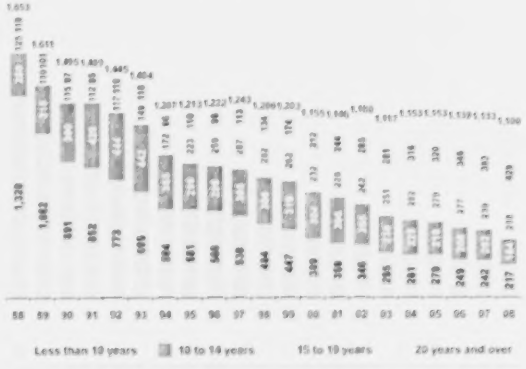


1,856 boats were used in commercial fishing in Quebec in 1988. Since then, the number has significantly decreased due to the collapse in groundfish stocks. In 1994, there were 1,709 boats, 35% fewer than in 1988. Over the subsequent years, the number of boats has continued to decrease, although at a lesser rate. In 2008, Quebec had 1,101 active fishing boats, a decrease of 9% compared to 1994. As illustrated in Graph 25, the numbers for the different categories of boat lengths followed different trends during this period. While the number of boats less than 35 feet long decreased by more than 65% since 1988 (1,267 to 440), the number of boats measuring more than 35 feet increased from 589 to 661 during the same period, an increase of 12%. As a result, approximately 40% of boats measured less than 35 feet in 2008 (compared to nearly 70% of the fleet in 1988), 44% had a length between 35 and 45 feet, and 16% of boats measured 45 feet or more.

Graph 25: Evolution of the number of active fishing boats by length, Quebec, 1988-2008



Graph 26: Evolution of the number of active fishing boats by age, Quebec, 1988-2008



With respect to the age of boats utilized for commercial fishing, there has been a decrease, both in number and in relation to the entire fleet, of those aged less than ten years. Boats less than ten years old represented 72% of all the fleet in Quebec in 1988, compared to only 20% in 2008. This aging of the fleet may be less worrisome than the statistics seem to show, since major renovations are carried out more and more frequently, but these refits are not reflected in the statistics.

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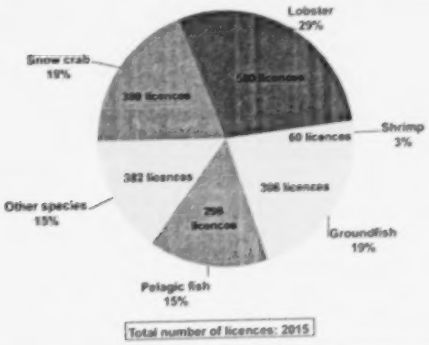

Source: SLD, DFO, Quebec Region

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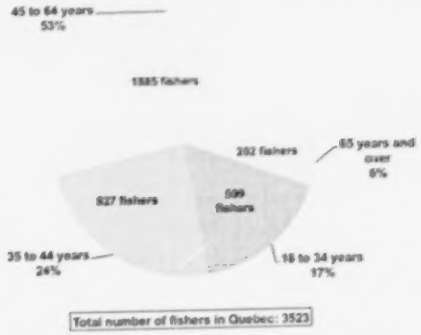

Source: SLD, DFO, Quebec Region

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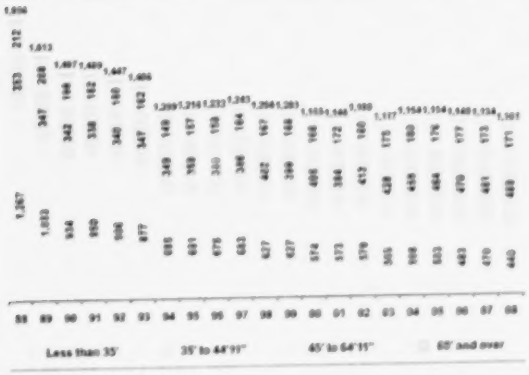
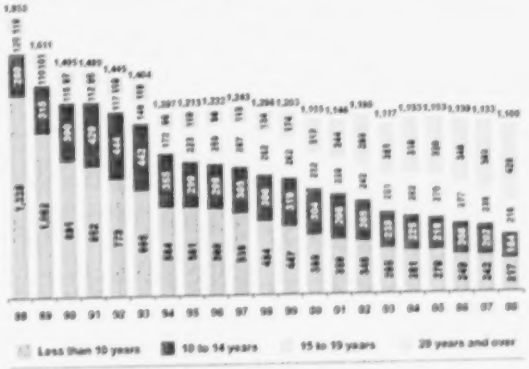


Source: SLD, DFO, Quebec Region

Graph 26: Evolution of the number of active fishing boats by age, Quebec, 1988-2008



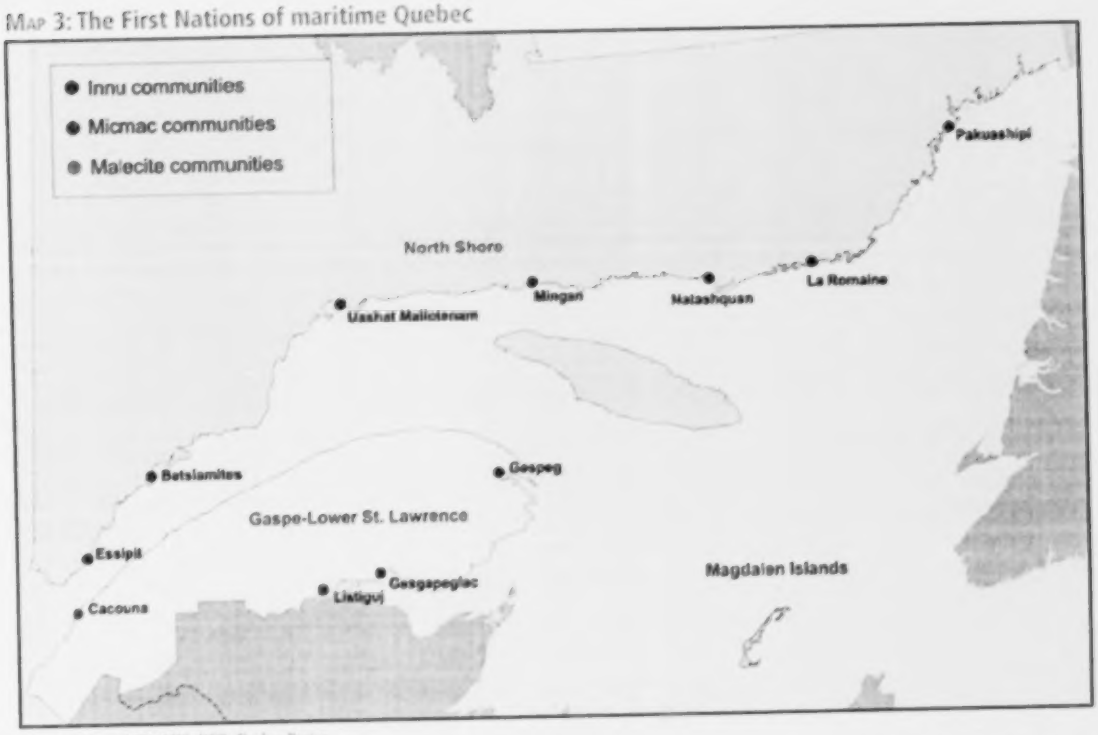
Source: SLD, DFO, Quebec Region

With respect to the age of boats utilized for commercial fishing, there has been a decrease, both in number and in relation to the entire fleet, of those aged less than ten years. Boats less than ten years old represented 72% of all the fleet in Quebec in 1988, compared to only 20% in 2008. This aging of the fleet may be less worrisome than the statistics seem to show, since major renovations are carried out more and more frequently, but these refits are not reflected in the statistics.

2.4 Maritime Quebec First Nations

Quebec includes eleven First Nations communities that are active in commercial fishing: three Micmac communities, one Malecite community and seven Innu communities. The First Nations of the Gaspe-Lower St. Lawrence area (Micmac and Malecite) began commercial fishing in 2000, following the Supreme Court ruling in the Marshall case[12]; while communities on the North Shore (the Innu) began in 1996, during the implementation of the Aboriginal Fisheries Strategy (AFS)[13] which resulted from the Sparrow Supreme Court ruling in the Sparrow case.

Map 3: The First Nations of maritime Quebec



Source: SLD and FHAMIS, DFO, Quebec Region

In 2008, the Quebec First Nations communities used 68 fishing boats and employed approximately 275 fishers. The value of their landings reached $16.4M, 11.5% of the Quebec total. Approximately one quarter of that amount, $4.2M, was landed outside of Quebec.

Between 1996 and 1999, before the communities of the Gaspe-Lower St. Lawrence area became active in commercial fishing, the landings of seven First Nations communities on the North Shore were comprised exclusively of snow crab. They generated total annual incomes between $0.1M and $0.5M. Since 2000, landings by the Quebec First Nations have been far more significant[14]. In that year, the First Nations of the Gaspe-Lower St. Lawrence area began commercial fishing, and the allocations to the North Shore communities also increased substantially. Growth in landings continued until 2004; then in 2005, the amounts landed stabilized as the price of crustaceans began to fall, causing a decrease in landing values.

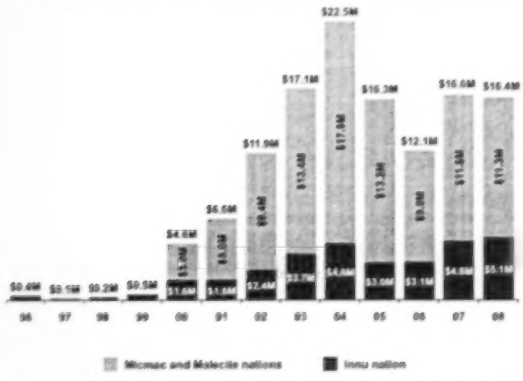
12 The Marshall ruling confirmed the right of Micmac and Maliseet signatories of treaties to moose hunting, fishing, trapping and the ability to trade in furs and to gain a moderate livelihood.

13 The strategy aims to facilitate access by First Nations communities to commercial fishery.

14 Between 1999 and 2000, there was a 900% increase in the value of landings by First Nations communities.

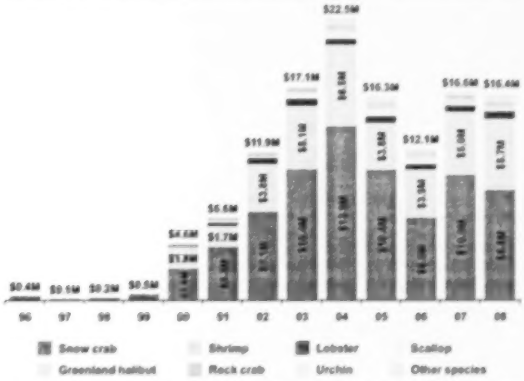
Together, snow crab (53.4%) and shrimp (34.9%) contributed more than 88% of the value of landings by First Nations communities in 2008. The other species landed, such as lobster (3.5%), Greenland halibut (2.7%), urchins (1.5%), rock crab (1.0%) and scallops (1.0%) were still marginal, although their share of landings has increased significantly since 2001[15].

Graph 27: Value of landings by Quebec First Nations, by nation, 1996-2008



Source: SLD, DFO, Quebec Region

Graph 28: Value of landings by Quebec First Nations, by species, 1996-2008



Source: SLD, DFO, Quebec Region

After the Marshall decision, Micmac and Malecite communities had better access to commercial fishing than the Innu, and their landings have accounted, on average, for 76% of Quebec First Nations landings since 2002.

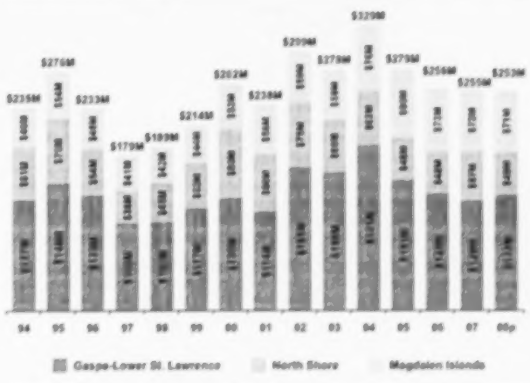
[15] The values presented in Graphs 29 and 30 include landings made outside of Quebec.

3 Sale and processing of marine resources

3.1 Production value and number of jobs

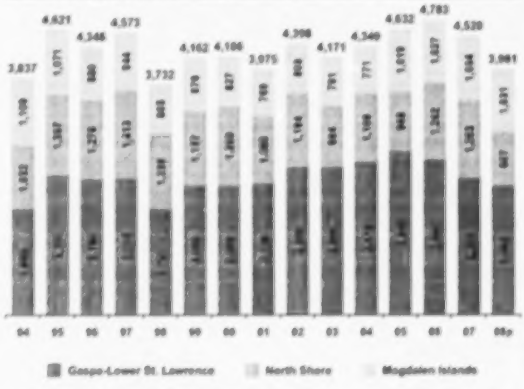
In 2008, the marine resources processing industry in maritime Quebec [16] comprised 82 businesses, whose total sales reached $253M[17]. Generally, these businesses buy fish and seafood directly from fishers, then sell these products to the local, national or world markets. A large number of these businesses carry out an initial processing stage (cooking, freezing, salting, packaging, etc.) before selling their products. The added value of the processing industry compared to the catch industry was $119M in 2008, which is the difference between the value of production ($253M) and the value of landings ($134M).

Graph 29: Production by marine resources processing businesses in maritime Quebec, by area, 1994-2008



Source: SID, DFO, Quebec Region

Graph 30: Number of jobs in the marine resources processing industry in maritime Quebec, by area, 1994-2008



Source: SID, DFO, Quebec Region

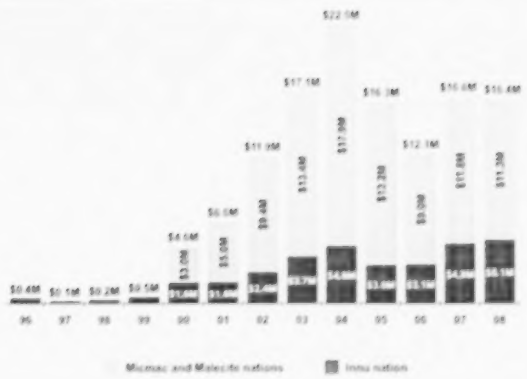
While 48% of Quebec fish and seafood catches were landed in the Gaspe-Lower St. Lawrence area, this region accounted for nearly 53% of all production by the processing industry. Conversely, on the North Shore and in the Magdalen Islands, the processing sector's share was relatively less significant than that of the catch sector. These two regions received, respectively, 22% and 30% of landings in Quebec; while the share of total production realized by their processing businesses was 19% and 28%. A greater proximity to major markets, as well as the choice location occupied by the shrimp industry (in which processing generates a greater added value than for most other species), are some factors that may explain the relative importance of the processing industry in the Gaspe-Lower St. Lawrence area.

[16] Processing businesses considered in this document are those located in the maritime regions of Quebec, and operating fish and seafood directly from fishers.

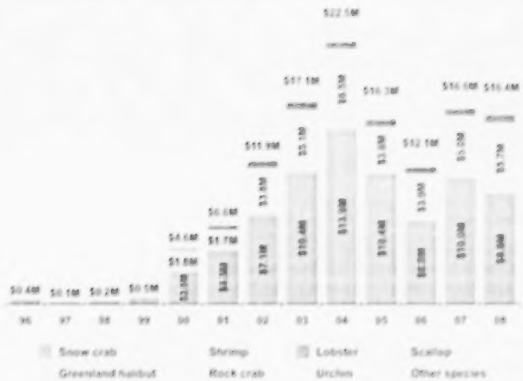
[17] The production statistics for 2008 are preliminary.

Together, snow crab (53.4%) and shrimp (34.9%) contributed more than 88% of the value of landings by First Nations communities in 2008. The other species landed, such as lobster (3.5%), Greenland halibut (2.7%), urchin (1.4%), rock crab (1.0%) and scallops (1.0%), were still marginal, although their share of landings has increased significantly since 2001.

Graph 27: Value of landings by Quebec First Nations, by nation, 1996-2008



Graph 28: Value of landings by Quebec First Nations, by species, 1996-2008

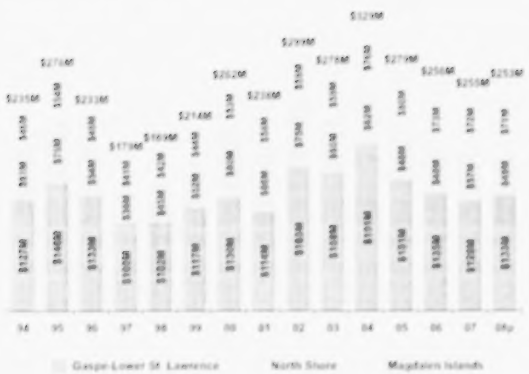


After the Marshall decision, Micmac and Malecite communities had better access to commercial fishing than the Innu, and their landings have accounted, on average, for 76% of Quebec First Nations landings since 2002.

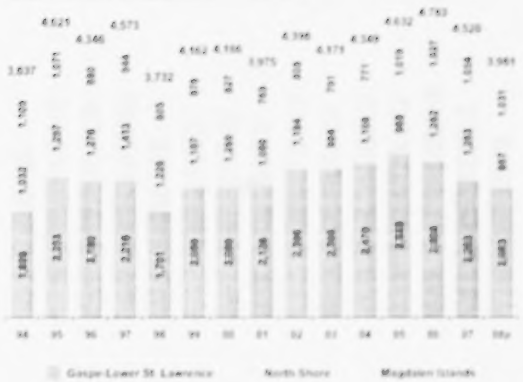
3 Sale and processing of marine resources

3.1 Production value and number of jobs

Graph 29: Production by marine resources processing businesses in maritime Quebec, by area, 1994-2008



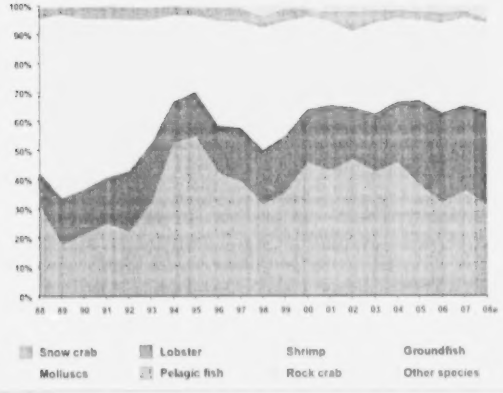
Graph 30: Number of jobs in the marine resources processing industry in maritime Quebec, by area, 1994-2008



There were significant fluctuations in the production of marine products in Quebec over the last 15 years, which generally followed the pattern observed in the catch sector. After nearly doubling between 1988 and 2004, from $172M to $329M, production levels again decreased to a total of $253M in 2008. Snow crab production, which varied between $53M and $151M from 1988 to 2004, explains most of these fluctuations. Production for other species was, by comparison, relatively stable.

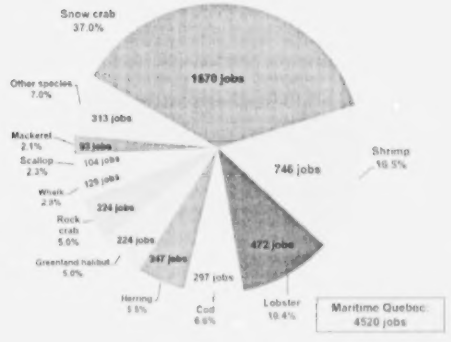
Between 1987 and 2008, the share of groundfish products in the total production in Quebec decreased significantly, from 44% to 6% [1]. This decline is due to the collapse in stocks, as well as to moratoria introduced in the early 1990s. Lobster, for which the share of production increased from 12% to 32% during the same period, compensated in part for the decline of groundfish. However, the relative production shares of snow crab, shrimp, molluscs and pelagic species did not grow, although there were significant increases in absolute terms in certain cases.

Graph 31: Production by marine resources processing businesses in maritime Quebec by species, 1988-2008



Source: SLD, DFO, Quebec Region

Graph 32: Number of jobs in the marine resources processing industry in maritime Quebec by species, 2007



Source: SLD, DFO, Quebec Region

The number of jobs in the marine product processing sector reached more than 4,500 in 2007. Of this number, approximately 1,670 were related to processing snow crab, 750 to shrimp and 470 to lobster. In 2007, nearly 50% of jobs were located in the Gaspe-Lower St. Lawrence area, with the two other maritime areas sharing the balance. It must be noted that the job statistics represent the maximum number of employed persons in the course of one year, and that most of these jobs are seasonal.

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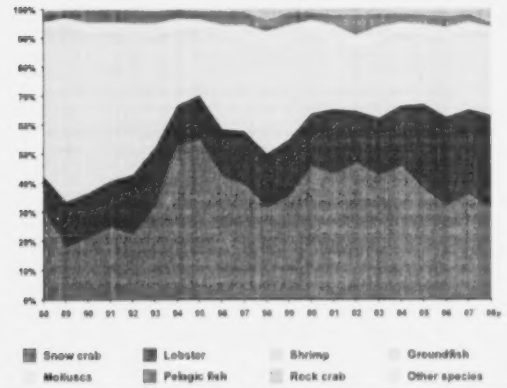

Source: SLD, DFO, Quebec Region

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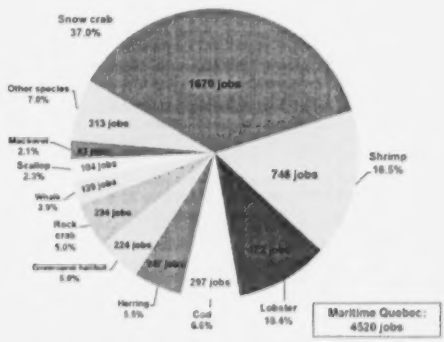

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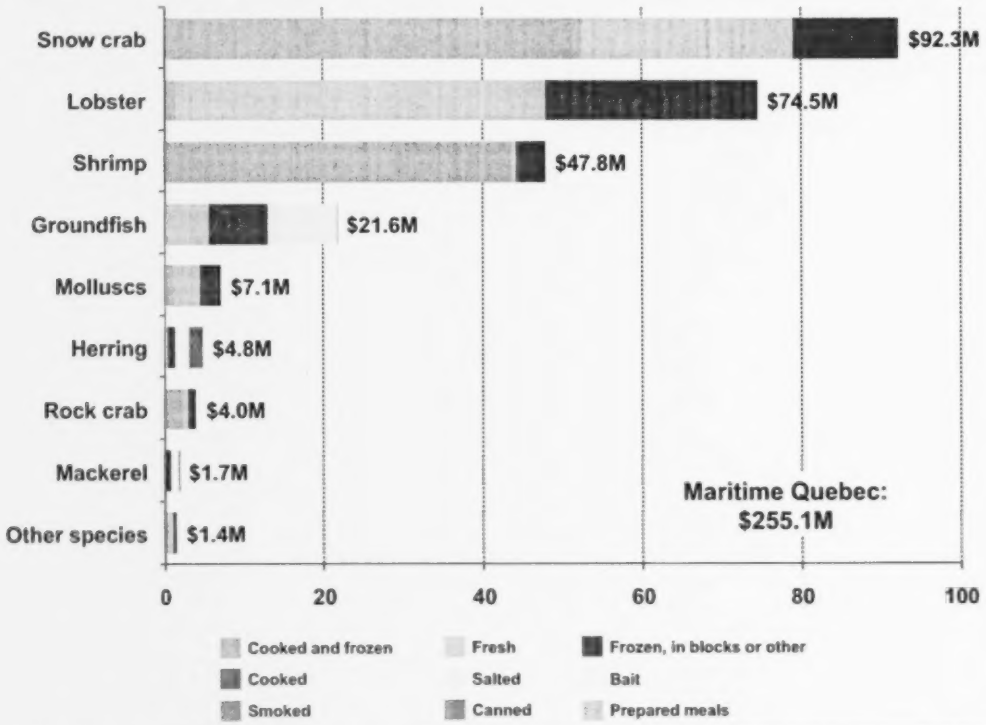
[*] It decreased from 44% to 33% between 1987 and 1988.

3.2 Types of processing

In 2007, the marine resources processing industry produced $92.3M worth of snow crab products. It was thus the main species in this activity sector, followed by lobster ($74.5M) and shrimp ($47.8M). These three species together accounted for nearly 85% of production. As illustrated in Graph 33, most of the marine products were sold cooked and frozen (40%), or fresh (33%); cooked dishes and canned goods, as well as smoked, salted, or marinated dishes represented only 4.3% of production.

Graph 33: Value and composition of production in maritime Quebec, 2007



Source: SLD, DFO, Quebec Region

3.3 Businesses

Of the 82 businesses in the processing sector in maritime Quebec, the twelve principal businesses accounted for 62% of production, and approximately 53% of jobs in the industry. The following table provides basic information on these businesses.

Table 1: Principal marine resources processing businesses in maritime Quebec in 2007

Name of buyer	Community	Maritime area	Sales figures	Number of jobs
Madelimer[19]	Grande-Entrée	Magdalen Islands	$15M+	300+
E. Gagnon & Fils	Sainte-Thérèse-De-Gaspé	Gaspe-LSL	$15M+	200-300
Les Fruits de Mer de l'Est du Québec	Matane	Gaspe-LSL	$15M+	200-300
Unipêche M.D.M.	Paspébiac	Gaspe-LSL	$15M+	300+
Poissonnerie du Havre	Havre-Saint-Pierre	North Shore	$10M-$15M	100-200
Les Pêcheries Marinard	Rivière-au-Renard	Gaspe-LSL	$10M-$15M	200-300
Poséidon	Longue-Pointe-de-Mingan	North Shore	$5M-$10M	Less than 100
Crevettes du Nord Atlantique	L'Anse-au-Griffon	Gaspe-LSL	$5M-$10M	100-200
Les Pêcheries Gros-Cap[19]	Cap-aux-Meules	Magdalen Islands	$5M-$10M	100-200
Cape Dolphin Fisherman's Coop.	Grosse-Île	Magdalen Islands	$5M-$10M	Less than 100
Crustacés Baie-Trinité	Baie-Trinité	North Shore	$5M-$10M	100-200
Pêcheries Norpro	Havre-Aubert	Magdalen Islands	$5M-$10M	100-200
The other 72 businesses			$96.9M	2124
TOTAL			**$255.1M**	**4,520**

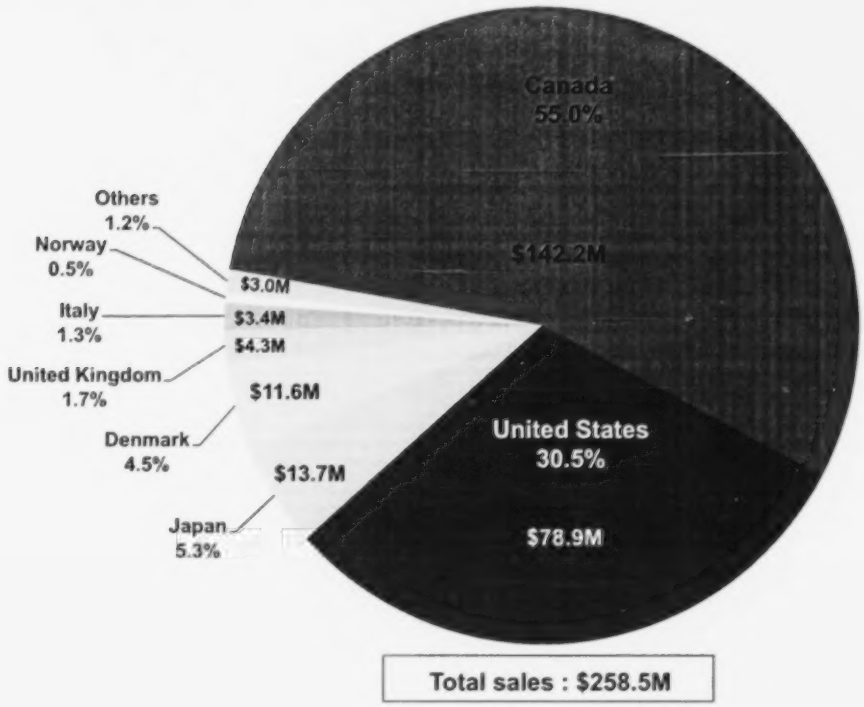
Source: SLD, DFO, Quebec Region

[19] The Madelimer and Les Pêcheries Gros Cap companies merged in 2009, to form the Cap sur Mer company.

3.4 Sales destinations

Approximately 55% of Quebec fish and seafood production was sold on the Canadian market in 2007. This represented sales of $142.2M. The rest of the products were exported mainly to the United States ($78.9M, 68% of exports), but also to Europe ($21.9M, 19%), Japan ($13.7M, 12%) and, to a lesser extent, China ($1.2M, 1%).

Graph 34: Sales destinations of marine products from maritime Quebec, by country, 2007



Source: SLD, DFO, Quebec Region

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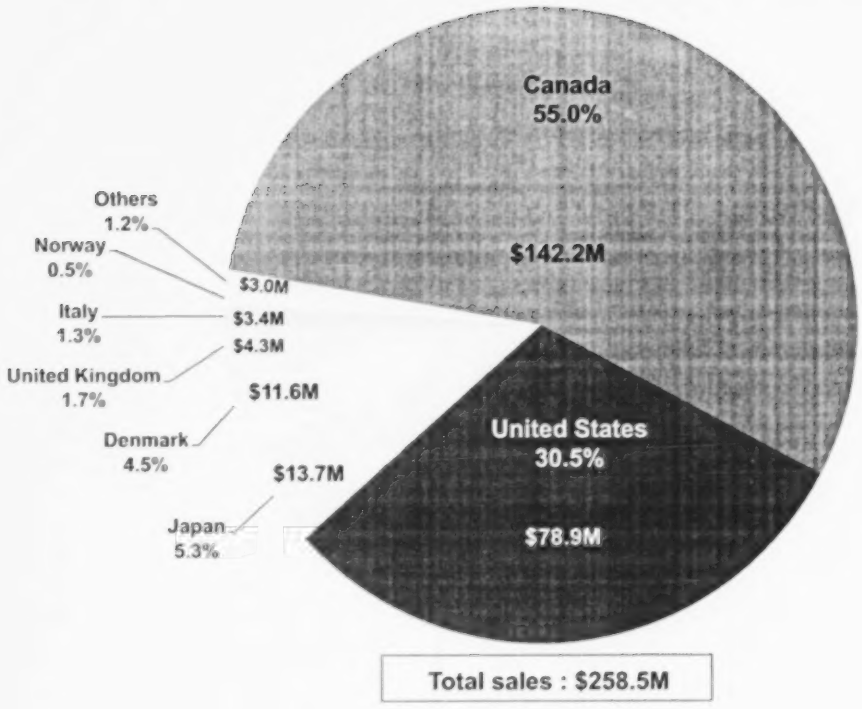
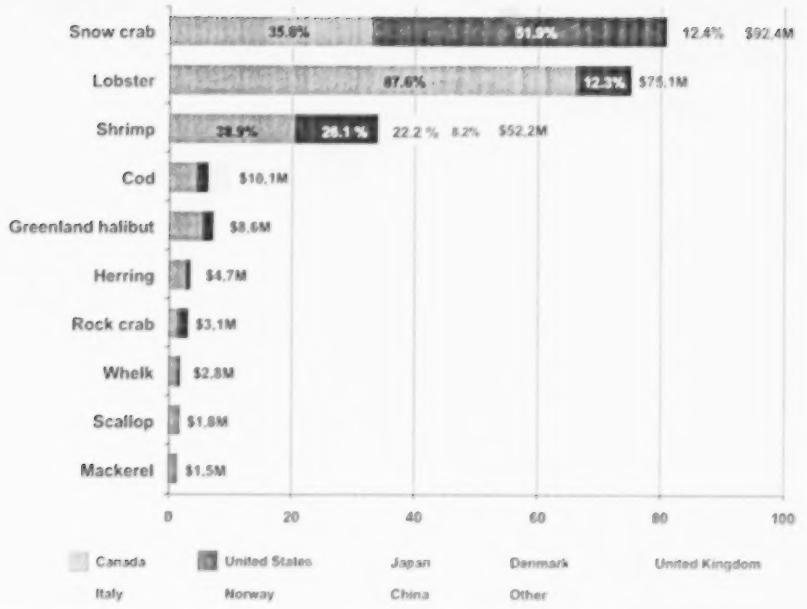
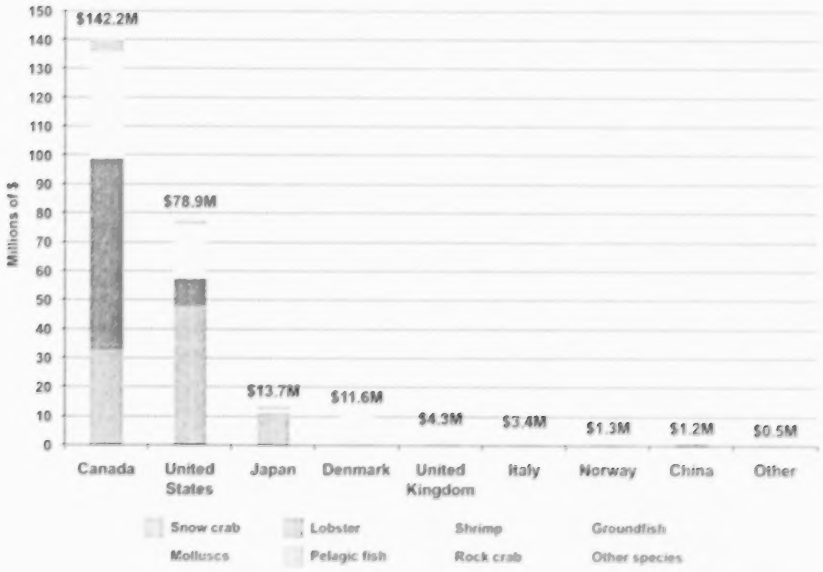
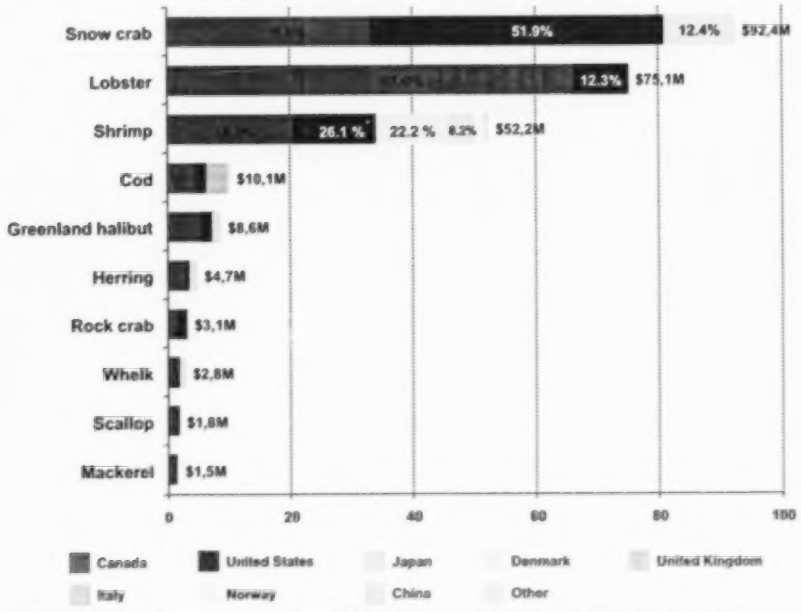



Snow crab
35.6%
51.9%
12.4%
$92.4M
Lobster
87.6%
12.3%
$75.1M
Shrimp
38.9%
28.1 %
22.2 %
8.2%
$52.2M
Cod
$10.1M
Greenland halibut
$8.6M
Herring
$4.7M
Rock crab
$3.1M
Whelk
$2.8M
Scallop
$1.8M
Mackerel
$1.5M
0
20
40
60
80
100
Canada
United States
Japan
Denmark
United Kingdom
Italy
Norway
China
Other


$142.2M
$78.9M
$13.7M
$11.6M
$4.3M
$3.4M
$1.3M
$1.2M
$0.5M
Millions of $
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Canada
United States
Japan
Denmark
United Kingdom
Italy
Norway
China
Other
Snow crab
Lobster
Shrimp
Groundfish
Molluscs
Pelagic fish
Rock crab
Other species

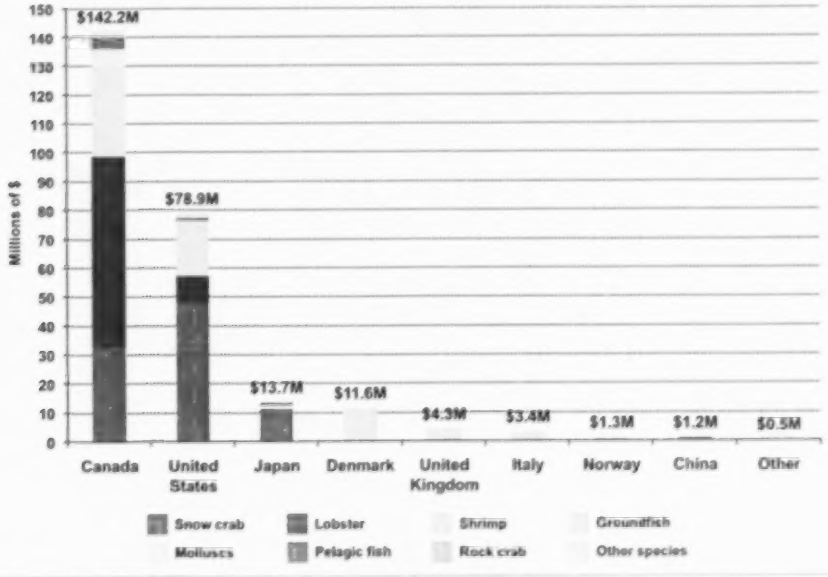
As illustrated in Graph 35 and 36, the sales destinations differed greatly according to species. As such, more than half of the snow crab produced in Quebec is sold to the United States (52%), while 88% of lobster is sold in Canada. Nearly 40% of the shrimp production is sold in Canada, with the difference exported to Europe (30.6% of sales) or the United States (26.1%). Similarly, more than half of the cod was exported to Italy (33% of sales) and the United States (19%). Most of the other species were sold principally in Canada, with the exception of rock crab, for which half the production was sold to the United States.

GRAPH 35: Sales destinations of marine products from maritime Quebec, by species, 2007



Source: SLD, DFO, Quebec Region

GRAPH 36: Sales values of marine products from maritime Quebec, by export country and species, 2007

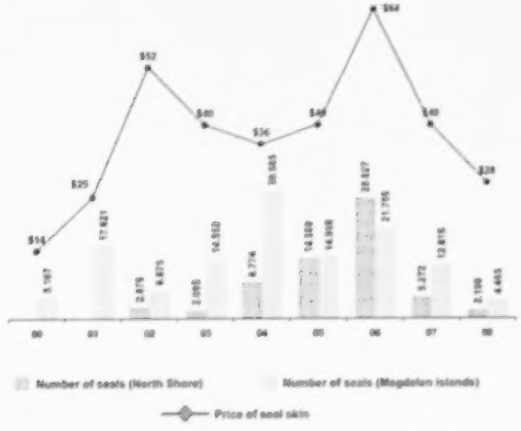


Source: SLD, DFO, Quebec Region

4 Harp seal hunting

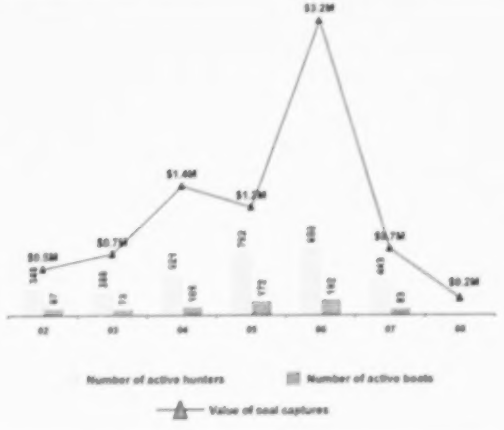
Generating an income that varies by year from a few hundred thousand dollars to more than $3M, seal hunting represents a significant economic activity in the Magdalen Islands and on the Lower North Shore. As illustrated in Graphs 37 and 38, seal captures fluctuate from one year to the next according to the prices obtained for skins and the spring ice conditions.

Graph 37 : Evolution of harp seal prices and captures in Quebec, 2000-2008



Source: SED, DFO, Quebec Region

Graph 38 : Number of hunters and active seal boats in Quebec and total value of seal captures, 2002-2008



Source: SED, DFO, Quebec Region

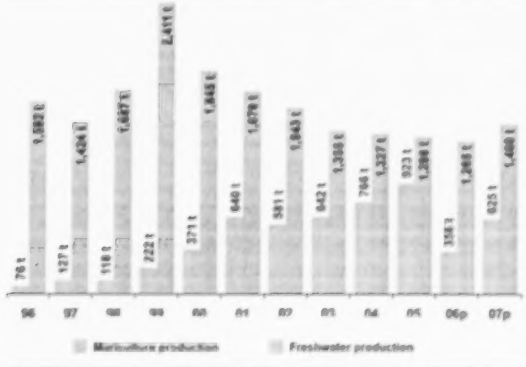
From 2002 to 2007, the number of active hunters in Quebec varied between 288 and 850. On average, there were 540 participants per year, almost equal numbers of whom hailed from the Magdalen Islands (268) and the Lower North Shore (272). Over the same period, on average, 119 boats were involved in the hunt annually, resulting in a participation rate of approximately 4.5 sealers per boat. In the Magdalen Islands, 93% of seal hunters use boats measuring more than 35 feet, while on the Lower North Shore, boats measuring less than 35 feet are used far more frequently (by 48% of hunters). The majority of seal-hunting permit holders are fishers, for whom hunting is a complementary economic activity.

5 Aquaculture

In 2007, aquaculture production in Quebec was estimated at more than 2,000 tonnes, with a value of approximately $12M. Excluding production for stocking, which represented more than two-thirds of the production in terms of value, aquaculture production was nearly 1,200 tonnes, and worth $4M.

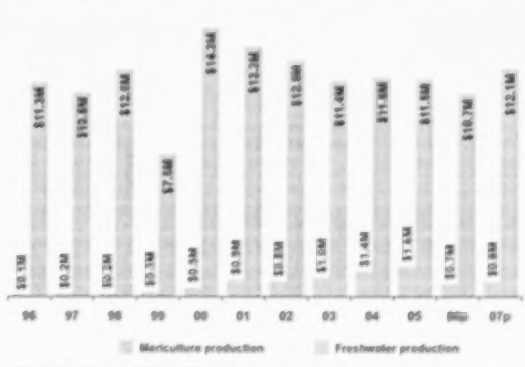
In Quebec, freshwater production mainly involves raising different salmon species, such as rainbow, brook or lake trout and Arctic char. Maricultural production consisted largely of mussels and scallops. Soft-shell clams urchins and oysters are emerging production sectors. In 2007, Quebec production was distributed among 141 operators, 114 of whom work in fresh water and 24 in salt water. This uneven distribution (fresh water / salt water) is explained by the fact that commercial aquaculture in fresh water has been an active industry in Quebec for 30 years, while the mariculture industry has only developed in the last decade.

Graph 39: Value of Quebec aquaculture production, 1996-2007



Source: MAPAQ

Graph 40: Quebec aquaculture production in tonnes, 1996-2007



Source: MAPAQ

5.1 Freshwater production

Between 1999 and 2003, production in the freshwater sector declined more than 35% due to the closure of large businesses (as a result of bankruptcy or environmental disputes). When the Sustainable Development Strategy for Freshwater Aquaculture in Quebec (STRADDAQ) was signed in 2004, production stabilized at approximately 1,400 tonnes. STRADDAQ is a partnership agreement between the Fish Farmers Association of Quebec (AAQ) and the Quebec government[20]. Fish farming businesses that join this agreement are aiming to reduce phosphorus discharge to 4.2 kg per ton of production, by 2014. This will amount to a Quebec-wide decrease of approximately 40% in the amount of phosphorus discharged by fish farming into the environment. STRADDAQ applies preferentially to fish farming businesses that produce more than five tonnes annually.

[20] The Ministry of the Environment and the Ministry of Agriculture, Fisheries and Foods (MAPAQ)

5.2 Maricultural production

In 2007, less than 2% of Canadian maricultural production came from Quebec. The provincial production is, however, growing strongly, having increased from 76 tonnes in 1996 to 625 tonnes in 2007[1], an average annual growth of 72%. The value of maricultural production in Quebec increased from approximately $100,000 to more than $800,000 over the same period. In 2008, approximately 6,700 marine hectares, spread across 49 sites, were exploited by 27 businesses. This industry employed approximately 100 people per year, mainly from May to November.

Table 2: Summary of Quebec mariculture, by maritime area, 2008

	Gaspe-Lower St. Lawrence	North Shore	Magdalen Islands	Total
Number of businesses	15	7	5	27
Number of sites	27	10	12	49
Area (marine hectares)	3,031	2,375	1,317	6,723
Species (in order of importance)	Mussel, scallop, sea urchin, auklet	Mussel, scallop, soft-shell clam, sea urchin	Mussel, scallop, soft-shell clam	Mussel, scallop, soft-shell clam, sea urchin

Source: DFO, Quebec Region

[1] Production reached a peak of 923 tonnes in 2005.

6 Freshwater commercial fishing

In Quebec, commercial freshwater fishing is mainly concentrated in the river corridor of the St. Lawrence. In 2007, landings reached 696 tonnes, and generated a total income of $1.6M. 135 fishers[22] were involved, for whom an average yearly income was approximately $12,000. The industry has declined significantly over the last 20 years. The main species fished were, according to value, eel, yellow sturgeon, black sturgeon, brown bullhead and yellow perch.

The following tables outline statistics concerning the commercial freshwater fishing carried out in the St. Lawrence estuary and inland waters of Quebec, in addition to the commercial fishing of anadromous fish (smelt and salmon) carried out in the Gaspe area and on the North Shore.

Table 3: Catches of anadromous and freshwater fish, by area, 2007 (thousands of $)

Species	Estuary and inland waters	Gaspe	North Shore	Total
Eel	774.8			774.8
Yellow sturgeon	175.2			175.2
Black sturgeon	166.7			166.7
Brown bullhead	132.6			132.6
Yellow perch	127.3			127.3
Unspecified panfish	74.1			74.1
Anadromous salmonids			58.5	58.5
Rainbow smelt	4.6	31.1	0.2	35.9
Channel catfish	34.8			34.8
Carp	27.8			27.8
Chub	3.4			3.4
Other freshwater fish	97.3			97.3
Total	**1 618.6**	**31.1**	**58.6**	**1 708.4**

Source: MAPAQ

[22] 135 fishers and 350 crew members

Table 4: Number of licence holders, by area, 2006-2008

Year	Estuary and inland waters	Gaspé	North Shore	Total
2006	136	43	176	355
2007	135	44	180	359
2008	137	44	179	360

Source: MAPAQ

7 Sport fishing in maritime Quebec

Sport fishing in maritime Quebec has been declining since 1990, both in terms of the number of fishers and of fishing days, as in the number of fish kept. Only the length of fishing expeditions has remained stable. The number of fishers and of fishing days decreased more than 60% between 1990 and 2005. The quantity of kept fish, for its part, fell more than 70%.

Table 5: Sport fishing in maritime Quebec, 1990-2005

Year	Number of fishing days	Average number of days per fisher	Number of fishers	Number of fish kept
1990	555,411	7.0	79,344	5,266,615
1995	198,915	5.0	39,783	2,920,463
2000	252,830	5.6	45,148	3,236,034
2005	197,444	6.5	30,376	1,543,697

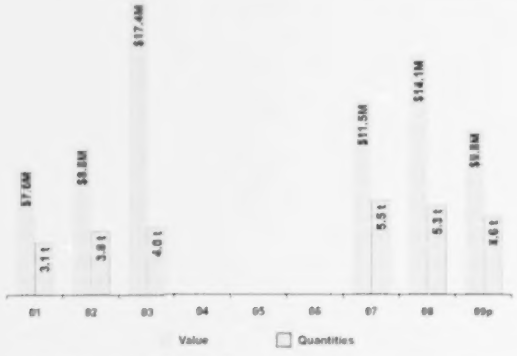
Source: Survey of Recreational Fishing in Canada, 1990-2005

8 Fishing and marine hunting in Nunavik

Nunavik makes up the northern third of Quebec and covers an area of approximately 507,000 km² of tundra and boreal forest. The 11,500 Nunavik citizens, of whom 90% are Inuit, live along the coast in 14 villages.

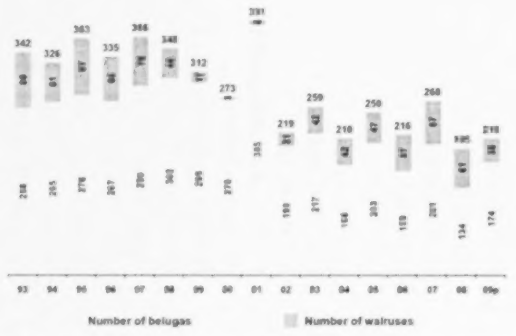
Two species – shrimp and Greenland halibut – are fished commercially in Nunavik waters. In recent years the Makivik Corporation[1] has transferred its allocation of Greenland halibut to other enterprises. However, Makivik continues to fish several shrimp species, in particular Northern shrimp. As seen in Graph 41, the quantity of shrimp captured in Nunavik grew 49% between 2001 and 2009; however the fluctuations in the price of this species meant that landed values only increased 30% over the same period, and, in fact, dropped 44% from the high of $17.4M in 2003, to $9.8M in 2009. The hiatus between 2004 and 2006 likely reflects a period of restructuring for Makivik, as catches were landed in Nova Scotia prior to 2004, but are now off-loaded in Newfoundland.

Graph 41: Nunavik commercial shrimp catches, 2001-2009



Source: SLD, DFO, Quebec Region

Graph 42: Beluga and walrus catches in Nunavik, 1993-2009



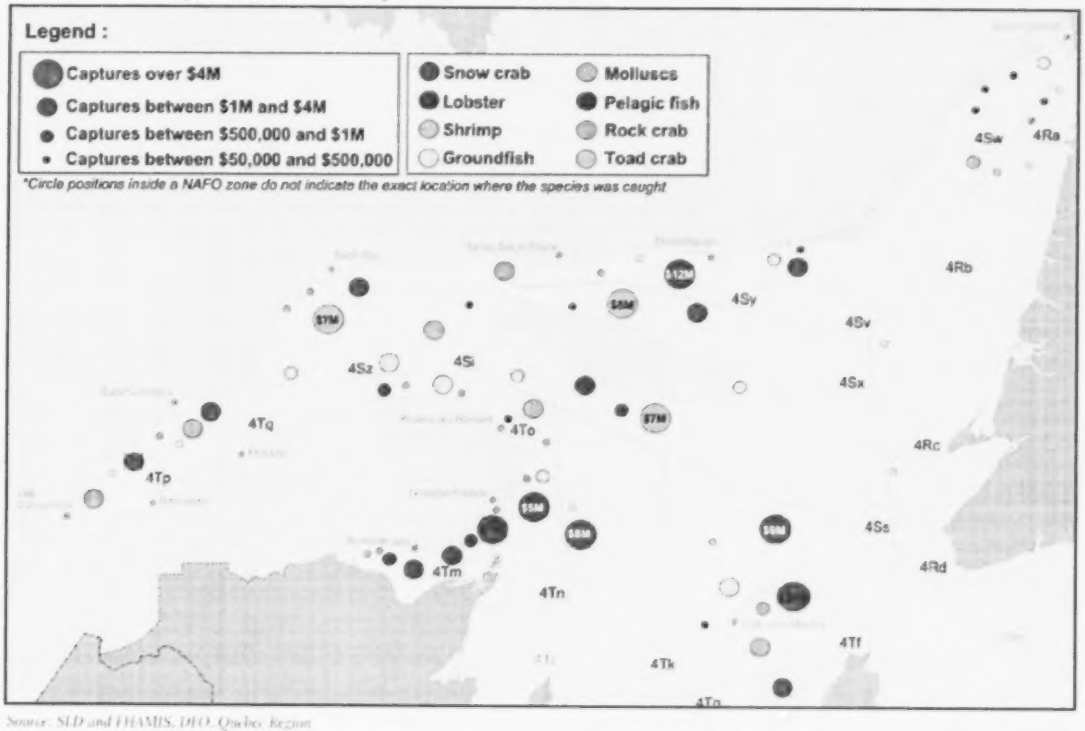
Source: SLD, DFO, Quebec Region

In addition to the commercial shrimp fishery, the Inuit catch numerous species of fish and invertebrates for food: Atlantic salmon, brook trout, cod, scallops, urchins, mussels, etc. They also hunt various marine mammals such as the common seal, bowhead whale, beluga and walrus. The latter two are the most significant marine species captured by Inuit for consumption. Graph 42 illustrates the evolution of the catches of these two species since 1993. It demonstrates that catches of both beluga and walrus have decreased over the last ten years, as a result of stricter management regulations.

[1] The Makivik Corporation is the legal representative of Quebec's Inuit people, established in 1978 under the terms of the James Bay and Northern Quebec Agreement.

APPENDIX– MAP OF CAPTURES BY QUEBEC FISHERS IN NAFO* ZONES

MAP 4: Catches by Quebec fishers, by NAFO zone, 2008



Source: SLD and FHAMIS, DFO, Quebec Region

* NAFO is the acronym for Northwest Atlantic Fisheries Organization

Appendix– Map of captures by Quebec fishers in NAFO zones